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Naval Facilities Engineering Command, MIDLANT

Safety Lessons Learned Accident Abstract



Accident Type: NEAR MISS, CUT 1800 VOLT STREET LIGHT CABLE
Injury: None
Type of Work: EXCAVATING AND TRENCHING
Equipment: BACKHOE

DESCRIPTION OF THE ACCIDENT:

On Monday morning January 7, 2008 PWD PA Submitted a Dig Permit Request to the engineering department in an attempt to locate a water main break. The area was marked by engineering with red paint, red flags, blue paint and blue flags. After a brief discussion of the situation and safety issues the supervisor instructs his employees to begin hand digging near a foundation wall of Quarters D. No crack or break is discovered. Supervisor instructs employees to hand dig area under the blue and red markings. After less than an hour of hand digging and close to 3 foot deep a steel pipe is located, but no electric lines are found. Supervisor expresses this concern to the engineer. The engineer indicates that it is possible that he picked up a telephone line and not an electric line. The approval to use the backhoe is given. This is based on several hours of hand digging, finding no electric lines and a print indicating the electric is on the opposite side of the Quarters. More of the steel pipe is exposed and its route travels underneath a large tree. But, still no break is discovered or electric lines found. It was then decided to open the valves and let water into the pipe in an attempt to locate a flow and possibly the break. The valves are opened and water quickly fills the pit. Since the pit was full of water, a decision was made to use the bucket of the backhoe to remove the water from the pit. After removing six or seven buckets of water and making very little progress, it was then decided to dig a hole next to the pit instead of obtaining a pump, to allow the water level in the pit to drain into this newly dug hole. As they begin to dig with the backhoe, it cuts through a 1800 volt electric power line causing a loud and violent arc flash. Employees are shaken but no one is hurt. The employees immediately call the Electrical Supervisor. The Electrical Supervisor and electricians respond quickly and the power is locked and tagged out. This power was for a transformer that feed street lighting.

DIRECT CAUSE: Local One call Dig system not called.

INDIRECT CAUSE Engineer did not receive proper training on scoping equipment.

ROOT CAUSE: No site specific standard operating procedures.

LESSONS LEARNED: Develop Site Specific Standard operating procedures.
Train Engineers, Supervisors and Employees on proper procedures and equipment used.

ACTIONS UNDERWAY: PW6 is compiling SOPs from the PWDs to create a standardized SOP for MIDLANT